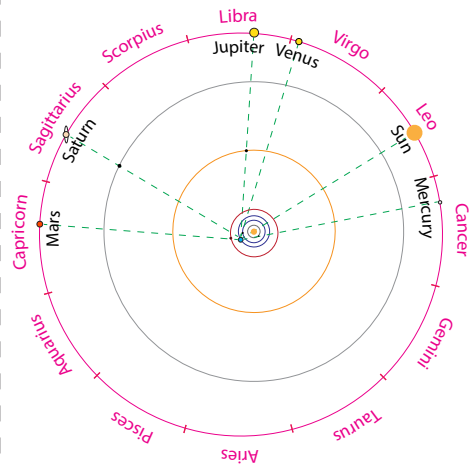


The best way to understand the night sky is through the classical idea of the ecliptic. Earth and the visible planets orbit the Sun in nearly the same plane (the ecliptic plane), and the Moon orbits the Earth in close to the same plane. So we see the Sun, Moon, and planets in nearly one line across the sky (the ecliptic). As the Earth rotates daily, the celestial sphere appears to rotate, and the Sun, Moon, and planets rise and set in sequence along the ecliptic. The Sun and the visible planets appear to move slowly along the ecliptic through the Zodiac constellations that divide it, with the planets' sequence and apparent motion changing based on where they are in their orbits.

The Ecliptic

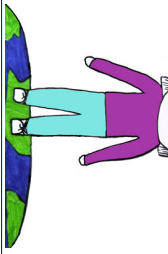


Sun and visible planet positions on September 1st and movements during September

LOOK UP!



Know the sky • Know the ecliptic • Know the G



Star finder, celestial sphere, pinpoint planetarium
Globetarium.com

Construction Instructions

- 1) Cut out shape along solid lines
- 2) If want to use for pinhole planetarium, poke out holes for stars using a push-pin.
- 3) Fold up along dashed lines.
- 4) Tape together edges with clear tape.

Constellations

Constellations are groups of stars in memorable shapes that divide up the sky in regions. The modern system is based on ancient Babylonian and Greek constellations. Most important are the 12 Zodiac constellations (mostly animals - hence the "zoo" of Zodiac) that divide up the ecliptic path of the sun and planets into 12 segments of 30 degrees each. The Zodiac "signs" traditionally reflect the constellation that the sun is in during that month, but due to Earth's 22,000-year wobble cycle the Zodiac is now out of sync by about a month. The imaginary lines connecting stars into constellations are not always very evocative of the constellation names, so the famous children's illustrator H.A. Rey ("Curious George") redrew them in the 1950s and many of his versions are now standard.

September 2018 Highlights

Venus, Jupiter, Saturn, and Mars visible along Ecliptic Line after Sunset

Mercury visible before Sunrise

September 1: Venus next to Spica in Virgo

September 9: New Moon

September 22: Autumn Equinox marks end of summer in Northern Hemisphere

September 25: Full Moon

Viewing Instructions

- 1) Look in from below to see constellations.
- 2) In small darkened room, shine cellphone light or flashlight in from below to see stars on ceilings and walls.

More information and files at
Globetarium.com and
Facebook.com/Globetarium.